Installation of Apache OpenMeetings 3.3.0 on Debian 9

This tutorial is made based on a fresh installations of

debian-9.1.0-amd64-DVD-1.iso

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.3.0 stable, that is to say will suppress his compilation. It is done step by step.

28-7-2017

Starting...

1)

First, we update and upgrade the OS:

sudo apt-get update

sudo apt-get upgrade

2)
                                   ------ **Installation of OpenJava 1.8** ------

OpenMeetings **3.3.0** need Java **1.8** to work. So, we install OpenJava 1.8:

sudo apt install openjdk-8-jdk openjdk-8-jdk-headless

...and his plugin for web:

sudo apt install icedtea-8-plugin

Now, please, select OpenJava, if you have more than one java versions installed:

sudo update-alternatives --config java

To see the active java version:

java -version

3)
------ Installation of LibreOffice ------

LibreOffice is need it to convert to pdf the uploaded office files.

The ubuntu desktop iso have already LibreOffice installed.

We do it also for server iso:

sudo apt-get install libreoffice

4)
------ Installation ImageMagic, Sox and Swftools ------

ImageMagic, will work the image files, png, jpg, gif, etc. Will install it and some more libraries and paquets:

sudo apt-get install -y imagemagick libjpeg62 zlib1g-dev unzip make build-essential wget nmap

Sox, work the sound. We´ll compile, because this version is newer than is in the repos:

cd /opt

wget http://sourceforge.net/projects/sox/files/sox/14.4.2/sox-14.4.2.tar.gz

tar xzvf sox-14.4.2.tar.gz

cd /opt/sox-14.4.2

./configure

make && make install

Swftools. LibreOffice convert to pdf the uploaded office files, and Swftools convert these pdf to swf, flash files, that later will show it in the whiteboard. Also convert jpg2swf, png2swf, gif2swf.

Don´t use a newer swftools version. Surely, will have not pdf2swf.

sudo apt-get install libgstreamer-plugins-base1.0-0 libgstreamer1.0-0 libgif7 libzzip-0-13

For 64 bit:

cd /opt

(Only one line without space between both)

wget http://mirrors.kernel.org/ubuntu/pool/universe/libo/liboil/liboil0.3_0.3.17-2ubuntu4_amd64.deb

dpkg -i liboil0.3_0.3.17-2ubuntu4_amd64.deb

(Only one line without space between both)

wget https://launchpad.net/ella-renaissance/ella-renaissance-beta/beta1/+download/swftools_0.9.1-1_amd64.deb

dpkg -i swftools_0.9.1-1_amd64.deb

ATTENTION!. Will fail, although we'll do, later, a trick to enable the files already installed.

For 32 bit:

cd /opt

wget http://mirrors.kernel.org/ubuntu/pool/universe/libo/liboil/liboil0.3_0.3.17-2ubuntu4_i386.deb

dpkg -i liboil0.3_0.3.17-2ubuntu4_i386.deb

(Only one line without space between both)

wget https://launchpad.net/ella-renaissance/ella-renaissance-beta/beta1/+download/swftools_0.9.1-1_i386.deb

dpkg -i swftools_0.9.1-1_i386.deb

ATTENTION!. Will fail, although we'll do, later, a trick to enable the files already installed.

For 64 bit and 32 bit: Now we'll do the trick. Even if the installation of Swftools has failed, in reality yes properly installs all related SWF files, plus the swftools package is recognized by the operating system as broken.

So, we'll uninstall it. But before, we'll backup those SWF files, and later we will restore to his corresponding place to be active:

mkdir /usr/local/bin/swftools

cd /usr/local/bin

(Only one line with space between both)

cp as3compile font2swf jpeg2swf pdf2swf png2swf swfbbox swfc swfcombine swfdump swfextract swfrender swfstrings wav2swf /usr/local/bin/swftools

...once the backup was done, we went to uninstall swftools:

sudo apt remove swftools

 ...and now we restore backup:

cd /usr/local/bin/swftools

(Only one line with space between both)

cp as3compile font2swf jpeg2swf pdf2swf png2swf swfbbox swfc swfcombine swfdump swfextract swfrender swfstrings wav2swf /usr/local/bin

5)

------ Installation of Adobe flash player ------

OpenMeetings even need Adobe Flash Player for rooms. We install it

sudo apt-get install flashplugin-installer

6)

------ Compilation of FFmpeg ------

FFmpeg will work with video. This compilation is based on:

https://trac.ffmpeg.org/wiki/CompilationGuide/Ubuntu

Updated files to 28-7-2017. Install some libraries:

(Only one line with space between each one)

sudo apt-get -y --force-yes install autoconf automake build-essential libass-dev libfreetype6-dev libgpac-dev libsdl1.2-dev libtheora-dev libtool libva-dev libvdpau-dev libvorbis-dev libxcb1-dev libxcb-shm0-dev libxcb-xfixes0-dev pkg-config texi2html zlib1g-dev nasm libx264-dev cmake mercurial libopus-dev curl git

I made a script that will download, compile and install ffmpeg.
The result of any recording we do in OpenMeetings, will be in mp4 format.
Please, download the script:

cd /opt

(Only one line without space between both)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_ubuntu1704.sh

...concede permission of execution:

chmod +x ffmpeg_ubuntu1704.sh

...and run it (be connected to Internet). The compilation will spend about 30 minutes:

./ffmpeg_ubuntu1704.sh

When finish the compilation, a text will announce it:

FFmpeg Compilation is Finished!

Then, please, go to **step 7).**

But if you prefer copy and paste (**i don´t advise**), here are the commands script:

sudo gedit /opt/ffpmeg.sh

...copy and paste **from here**:

FFmpeg compilation for Ubuntu 17.04 and Debian 9 only.
Alvaro Bustos. Thanks to Hunter.
Updated 28-7-2017

sudo apt-get update
sudo apt-get -y --force-yes install autoconf automake build-essential libass-dev libfreetype6-dev
libsdl1.2-dev libtheora-dev libtool libva-dev libvdpau-dev libvorbis-dev libxcb1-dev libxcb-shm0-
dev libxcb-xfixes0-dev pkg-config texi2html zlib1g-dev mercurial cmake libx264-dev libfdk-aac-
dev libmp3lame-dev libvpx-dev

# Create a directory for sources.
SOURCES=$(mkdir ~/ffmpeg_sources)
cd ~/ffmpeg_sources

Download the necessary sources.
wget http://www.tortall.net/projects/yasm/releases/yasm-1.3.0.tar.gz
hg clone https://bitbucket.org/multicoreware/x265
wget -O fdk-aac.tar.gz https://github.com/mstorsjo/fdk-aac/tarball/master
wget http://ffmpeg.org/releases/ffmpeg-snapshot.tar.bz2

```
# Unpack files
for file in `ls ~/ffmpeg_sources/*.tar.*`; do
tar -xvf $file
done

cd yasm-*/
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" && make && sudo make
install && make distclean; cd ..

cd x265/build/linux
PATH="$HOME/bin:$PATH" cmake -G "Unix Makefiles"
-DCMAKE_INSTALL_PREFIX="$HOME/ffmpeg_build" -DENABLE_SHARED:bool=off
../../source && make && sudo make install && make distclean; cd ~/ffmpeg_sources

cd mstorsjo-fdk-aac*
autoreconf -fiv && ./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make &&
sudo make install && make distclean; cd ..

cd ffmpeg
PATH="$HOME/bin:$PATH" PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib/pkgconfig"
./configure --prefix="$HOME/ffmpeg_build" --pkg-config-flags="--static" --extra-cflags="-
I$HOME/ffmpeg_build/include" --extra-ldflags="-L$HOME/ffmpeg_build/lib"
--bindir="$HOME/bin" --enable-gpl --enable-libass --enable-libfdk-aac --enable-libfreetype
--enable-libmp3lame --enable-libopus --enable-libtheora --enable-libvorbis --enable-libvpx
--enable-libx264 --enable-libx265 --enable-nonfree && PATH="$HOME/bin:$PATH" make &&
sudo make install && make distclean && hash -r; cd ..

cd ~/bin
cp ffmpeg ffprobe ffserver vsyasm yasm ytasm /usr/local/bin

cd ~/ffmpeg_build/bin
cp x265 /usr/local/bin

echo "FFmpeg Compilation is Finished!"
```

...to here.

Concede permission of execution:

chmod +x /opt/ffpmeg.sh

Now be connected to Internet, run the script and wait about 30 minutes while the compilation:

cd /opt

./ffmpeg.sh

7)
      ------ Installation and configuration of MariaDB data server ------

MariaDB is the data server. Will install it. (Version 10.x):

sudo apt-get install mariadb-server

Run MariaDB:

/etc/init.d/mysql start

Now we give a root password to MariaDB. Please, replace new-password with your own:

mysqladmin -u root password new-password

Make a database with his own user for OpenMeetings:

mysql -u root -p

...will ask for the root password that you have just choosen, type it...

MariaDB [(none)]> CREATE DATABASE open330 DEFAULT CHARACTER SET 'utf8';

With this command we has created a database called open330.
Now we create an user on this database. User password must be of 8 digits minimum:

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open330.* TO 'hola'@'localhost'
IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;

* open330 ......is the database name.
* hola ………is the user name for this database.
* 1a2B3c4D ..is the password for this user.

You can change the data...but remember it! Later we´ll need it.

Now, we leave MariaDB:

MariaDB [(none)]> quit

8)

------ Installation of OpenMeetings ------

We´ll install OpenMeetings in /opt/red5330. All the following information will be based on this directory.

Make the folder:

mkdir /opt/red5330

cd /opt/red5330

...and download the red5-OpenMeetings file:

wget http://apache.miloslavbrada.cz/openmeetings/3.3.0/bin/apache-openmeetings-3.3.0.zip

unzip apache-openmeetings-3.3.0.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.3.0.zip /opt

Do to **nobody** owner of the whole OpenMeetings folder installation, by security:

chown -R nobody /opt/red5330

Download and install the connector between OpenMeetings and MariaDB:

cd /opt

(Only one line without space between both)

wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.42/mysql-connector-java-5.1.42.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.42.jar /opt/red5330/webapps/openmeetings/WEB-INF/lib

Now we form OpenMeetings for our database in MariaDB:

gedit /opt/red5330/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

Modify line 72:

, Url=jdbc:mysql://localhost:3306/openmeetings_3_3?

...to

, Url=jdbc:mysql://localhost:3306/open330?

...it is the name of the database that we did initially.

If initially you choose another name for the database, replace it here. And save the changes.

We protect the access to the file:

<div align="center">(Only one line without space between both)</div>

chmod 640 /opt/red5330/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

9)

<div align="center">------ **Script to launch red5-OpenMeetings** ------</div>

Please, download the red5 run script:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-ubdeb2

...and copy it to:

cp red5-ubdeb2 /etc/init.d/

...and concede permission of execution:

chmod +x /etc/init.d/red5-ubdeb2

10)

<div align="center">------ **Run red5-OpenMeetings** ------</div>

Start MariaDB, if still it is not:

/etc/init.d/mysql start

...and now start red5-OpenMeetings. Please, be connected to Internet:

/etc/init.d/red5-ubdeb2 start

...will appear two text lines in the shell:

<div align="center">start-stop-daemon: --start needs --exec or --startas
Try 'start-stop-daemon --help' for more information.</div>

...you do nothing. Don´t worry, everything work right,

...wait 40 seconds at least, in order that red5 it is runing completely. And after this, can go to:

http://localhost:5080/openmeetings/install

...there will appear a page similar to this one:

...press on button (bottom), and will show the default database configuration

with Derby, but we employ MySQL (MariaDB),

...then, scroll and **Choose DB type** to MySQL:

...will show the database configuration we made in step 8. If you`ve choose any other different name for this, will show equally.

Now we must introduce the user name we did for our data base, at the step 7, and his password:

<div align="center">

Specify DB user   =   hola

Specify DB password   =   1a2B3c4D

</div>

Please, press   **>**   button, and will go to:

Here, we must introduce a user name for OpenMeetings, and his password. This must have 8 digits minimum, and at least 1 special symbol like: +(%#!...etc.

Username   =   a-name   ...this user will be administrator.

Userpass   =   password   ...for the previous user.

Email   =   email-adress   ...of the previous user.

User Time Zone   =   country where is this server.

Name   =   example-openmeetings   ...group name to choose.

Press the button   `>`   and will lead us to a new page (below) where you can select the language for your OpenMeetings server, as well as other options such as the configuration of the mail server being used to send invitations or meetings from OpenMeetings:


A valid example to configure the mail server with Gmail, is as follows:
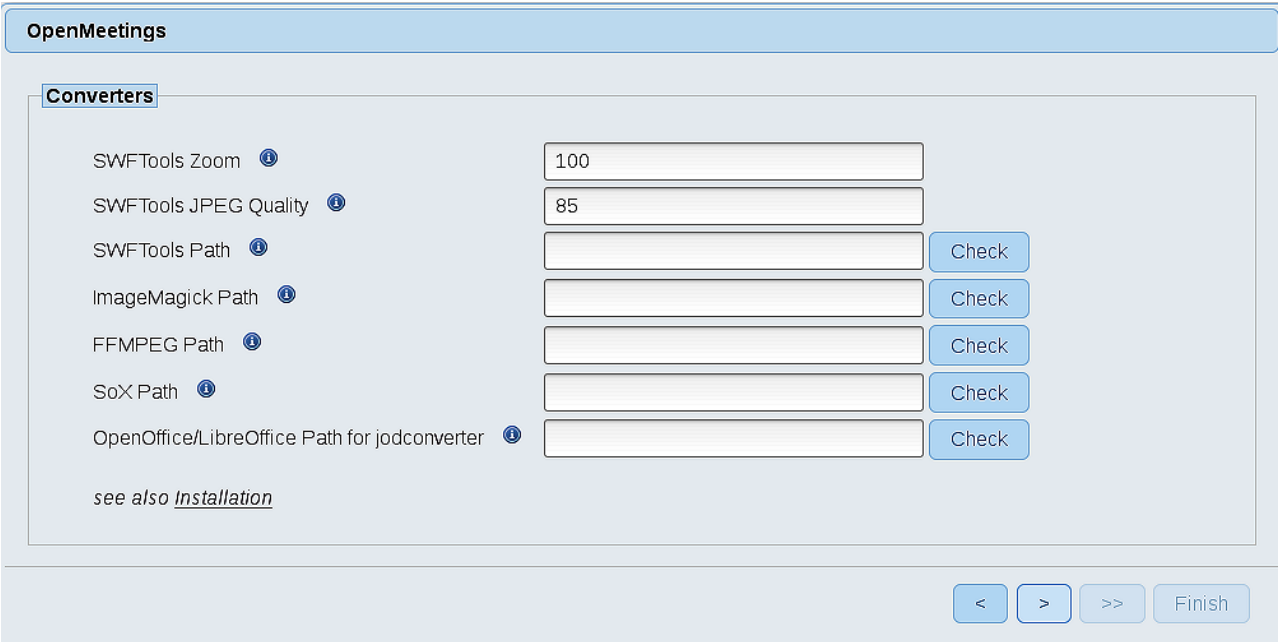(replace **john@gmail.com** with your real Gmail account)

Mail-Refer (system_email_addr) == john@gmail.com

SMTP-Server (smtp_server) == smtp.gmail.com

SMTP-Server Port (default Smtp-Server Port is 25)
(smtp_port) == 587

SMTP-Username (email_username) == john@gmail.com

SMTP-Userpass (email_userpass) == password of john@gmail.com

Enable TLS in Mail Server Auth == Yes

To select the language of your server OpenMeetings, please scroll on the line:

Default Language == english

...the rest can leave as is.

Now press the button > and a new page will appear:

Here we´ll introduce the respective paths for the image, video, audio and conversion of uploaded files:

SWFTools Path	==	/usr/local/bin
ImageMagick Path	==	/usr/bin
FFMPEG Path	==	/usr/local/bin
SOX Path	==	/usr/local/bin
OpenOffice/LibreOffice Path for jodconverter	==	/usr/lib/libreoffice **(32bit - 64bit)**

As you go introducing paths, you can check if they are correct by pressing the button labeled **Check**. If it does not display any error message, that is OK.

Once completed the paths, please click the button [>] and move on to another page that would be to activate the SIP. We will leave it as is, unless you want to activate it knowing what it does:

OpenMeetings

Crypt Type

Crypt Class   org.apache.openmeetings.util.crypt.SHA

*You can use this default crypt type which is equal to PHP-MD5 function or BSD-Style encryption by using:**org.apache.openmeetings.utils.crypt.MD5CryptImplementation** for more information or to write your own Crypt-Style see: Custom Crypt Mechanism You can edit this value later BUT previous created Users and Sessions might be not usable anymore*

red5SIP Configuration

Enable SIP   No

Enable red5SIP integration

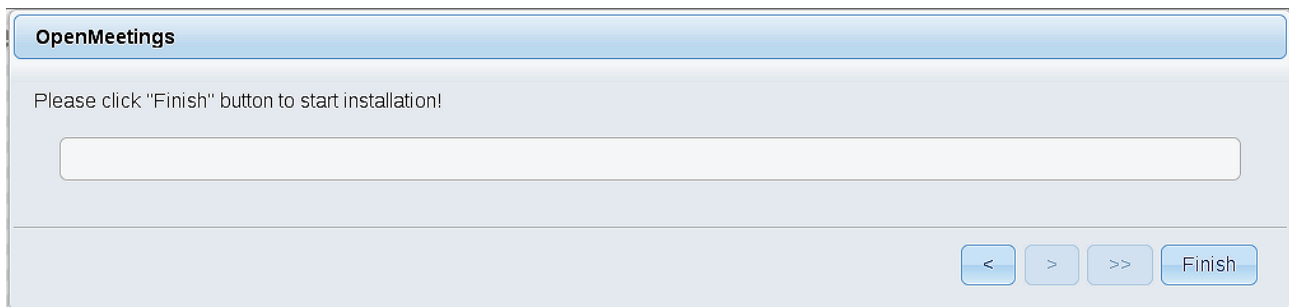SIP rooms prefix   400

Prefix for phone number of conference rooms

SIP extensions context   rooms

Context of Asterisk extensions

[<] [>] [>>] [Finish]

Now push the button [>] and will show this window:

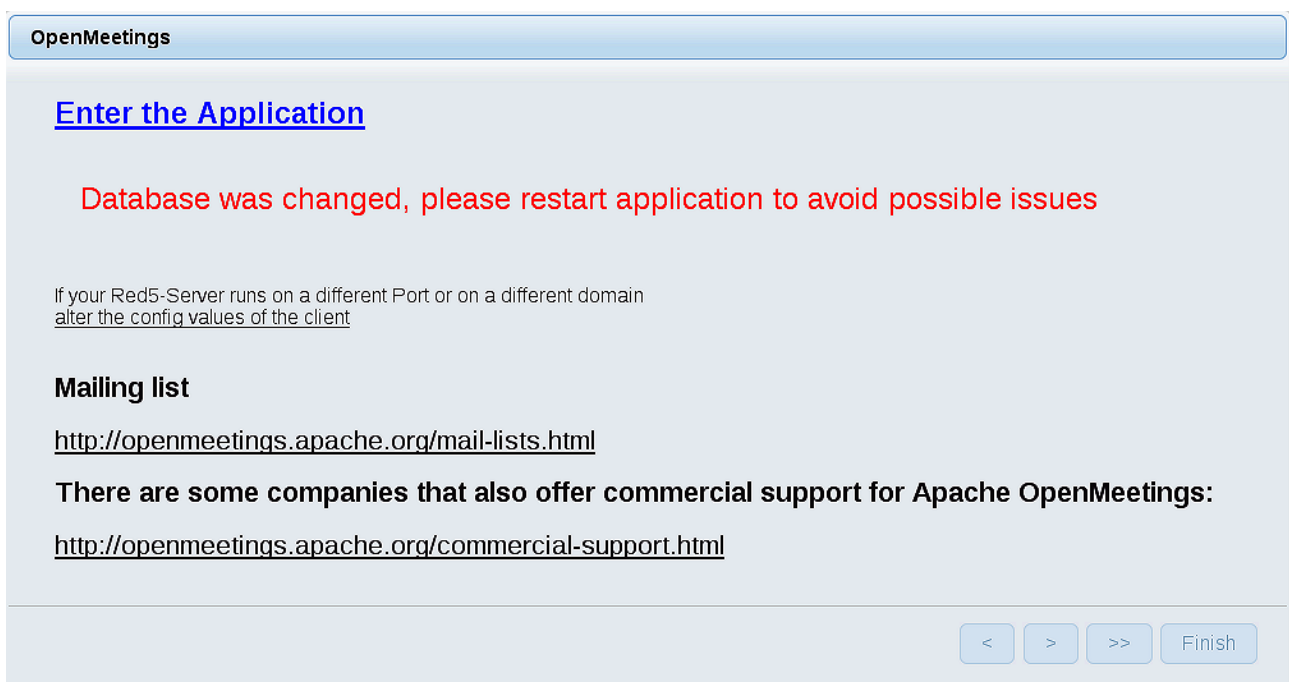| OpenMeetings |
| --- |
| Please click "Finish" button to start installation! |
| |
| < > >> Finish |

Press **Finish** button ...wait a seconds untill the tables are fill in the database.

When has concluded, this another page will appear. Don´t clic on **Enter the Application**.

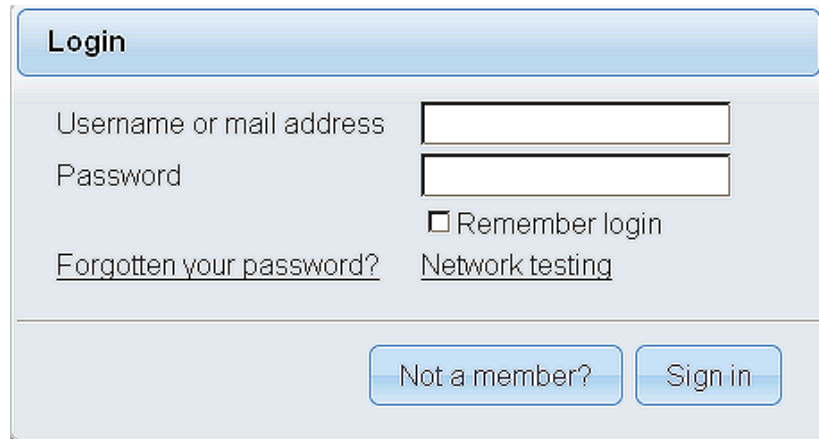First is need it to restart the server. Please, be connected to Internet:

/etc/init.d/red5-ubdeb2 restart

OpenMeetings
Enter the Application
Database was changed, please restart application to avoid possible issues
If your Red5-Server runs on a different Port or on a different domain alter the config values of the client
Mailing list
http://openmeetings.apache.org/mail-lists.html
There are some companies that also offer commercial support for Apache OpenMeetings:
http://openmeetings.apache.org/commercial-support.html
< > >> Finish

Now yes, you can clic on **Enter the Application**, or go with your browser to:

http://localhost:5080/openmeetings

...and will take us to the entry of OpenMeetings:

Introduce the user's name and the password that you have choosen during the installation, push
Sign in button, and…

...**Congratulations!**

The next time that you like accede to OpenMeetings would be:

http://localhost:5080/openmeetings

Remember to open in the server the two following ports:
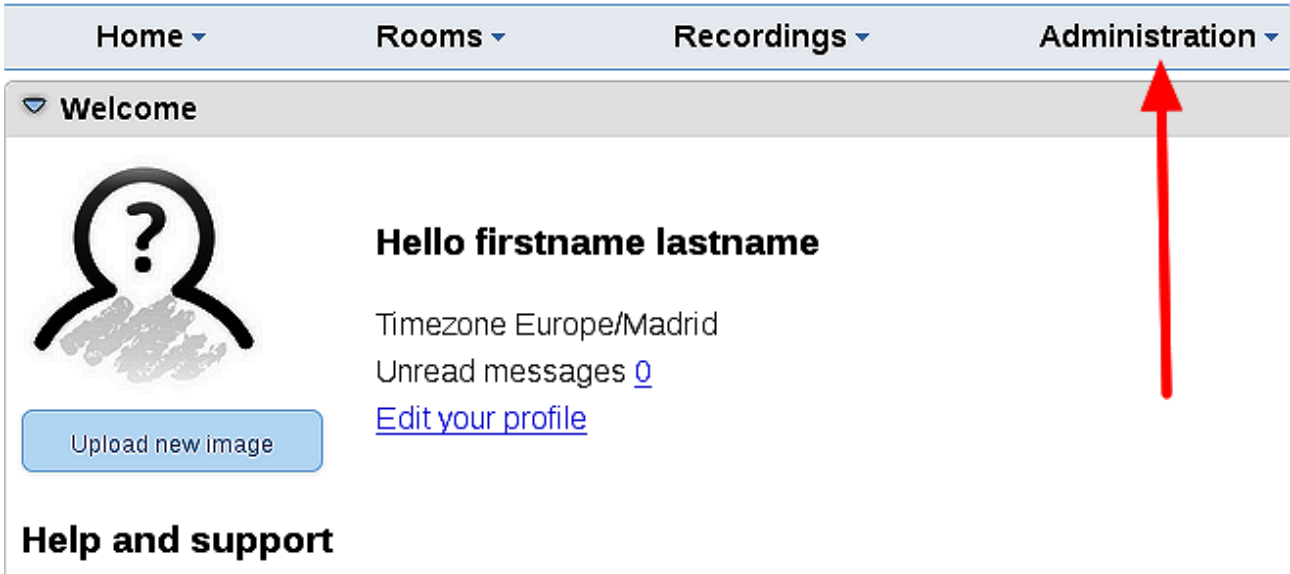

1935   5080

...in order that it could accede to OpenMeetings from other machines in LAN or Internet.
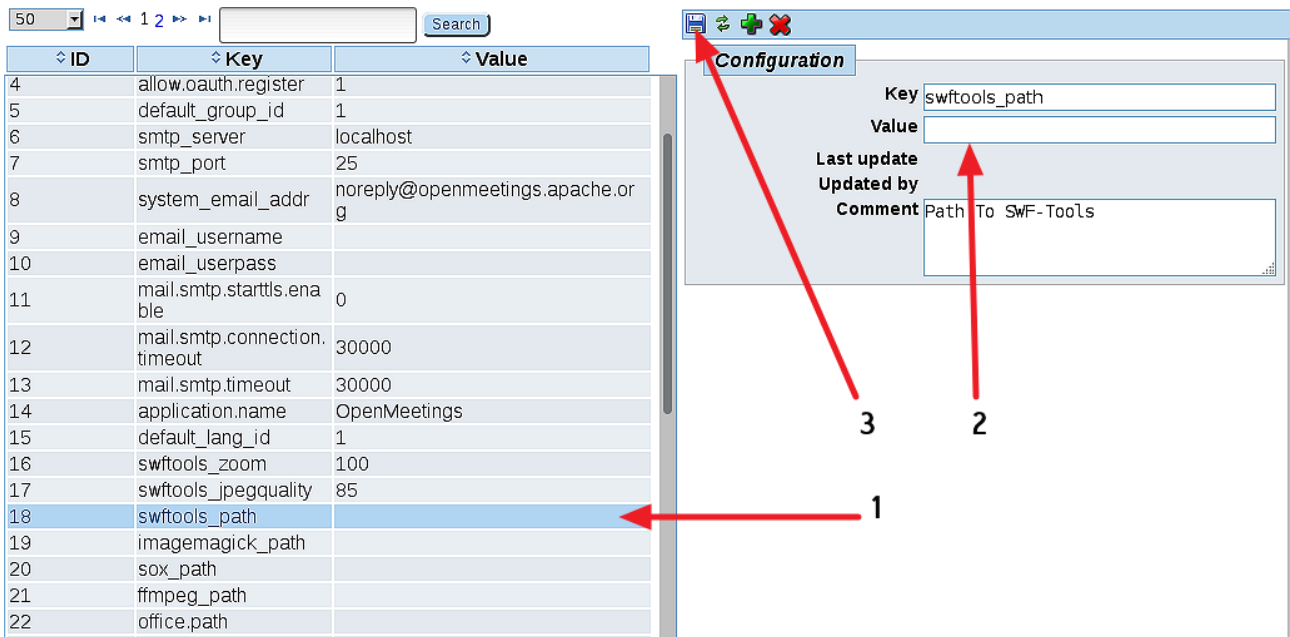

11)
------ **OpenMeetings's Configuration** ------

Once you acced to OpenMeetings, if you would like to do any modification in the configuration,
please go to:

Administration → Configuration

...and following the order of the red arrows:

Now we are going to remove files and folders that already do not serve us, if you do not prefer to save them:

rm -f /opt/mysql-connector-java-5.1.42.jar

rm -f /opt/sox-14.4.2.tar.gz

rm -f -R /opt/sox-14.4.2

12)

------ Special step for swftools ------

This is a special step to add **gif2swf** file to the others swf already installed.
At first place we´ll donload the mentioned file:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/gif2swf

...and copy it to where are the rest of swf files:

cp gif2swf /usr/local/bin

So, you can upload gif files, also, to OpenMeetings.

And this is all.

If you have some doubt or question, please raise it in the Apache OpenMeetings forums:

http://openmeetings.apache.org/mail-lists.html

Thank you.

Alvaro Bustos